

REMARKS/ARGUMENTS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the following remarks.

Presently, the Applicants have neither amended, canceled nor added any claims. Accordingly, Claims 41-50, 52-53, 55-67, 69 and 70 are currently pending in the application.

I. Rejection of Claims 41-42, 47-48, 55, 58-59, and 64-65 under 35 U.S.C. §102

The Examiner has rejected Claims 41-42, 47-48, 55, 58-59, and 64-65 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,499,405 to Loda ("Loda"). Independent Claims 41 and 58 currently include the element of at least one lens array placed within a drift space. The present invention, as detailed on page 4, lines 15-30, of the application as filed, defines drift space to be a region where no or substantially no electric field is present. The present invention goes on to say that the absence of the electric field provides for no acceleration or deceleration of the electrons.

Loda, in contrast, is directed to a hot cathode for broad beam electron gun. (Title) As shown in FIGURE 10, and discussed in the related text, Loda requires that a large electrostatic potential 32 be created between the grids 56 and 60, the large electrostatic potential accelerating the electrons. This is in direct contrast to the present invention, where the lens array is placed within the drift space where no or substantially no electric field is present, and thus no acceleration or deceleration exists. Accordingly, Loda fails to disclose this claimed element.

Therefore, Loda does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 42, 47-48, 55, 59, and 64-65 are dependent upon Claims 41 and 58, Loda also cannot be an anticipating reference for Claims 42, 47-48, 55, 59, and 64-65. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these Claims.

II. Rejection of Claims 41-42, 52-53, 58-59 and 69-70 under 35 U.S.C. §102

The Examiner has rejected Claims 41-42, 52-53, 58-59 and 69-70 under 35 U.S.C. §102(b) as being anticipated by Bono. Independent Claims 41 and 58 currently include the element that at least one lens array splits the electron beam into a plurality of sub beams. Bono fails to disclose this element.

Bono is directed to a unipotential lens assembly for charged particle beam tubes and method for applying correction potentials thereto. (Title) In contrast to the claimed invention, the object lens of Bono does not split the electron beam into a plurality of sub beams. Bono's disclosure is straightforward in this regard. Column 4, lines 23-30 of Bono states:

Preferably, coarse deflector 14 comprises an eight-fold coarse deflector of the type described and claimed in U.S. Pat. No. 4,142,132 and has coarse deflection potentials together with appropriate correction potentials supplied thereto for deflecting the electron beam to a desired one of the many micro lenslets formed by the axially aligned lens elements 11A, 11B and 11C of the objective lens assembly 11. The micro lenslets extend both vertically and horizontally in an X-Y plane so as to present a planar array of such micro lenslets with only one of the micro lenslets being accessed by coarse deflection of the electron beam at a given instant.

In this way, only one of the micro lenslets may be accessed by the coarse deflection of the electron beam at any one time. Although the expressed disclosure is directed to the apparatus depicted in Fig.

1, the apparatus depicted in Fig. 2 (which is the embodiment relied upon by the Examiner) provides the same functionality in this regard. Accordingly, Bono fails to disclose the aforementioned claimed element.

Therefore, Bono does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 42, 52-53, 59 and 69-70 are dependent upon Claims 41 and 58, Bono also cannot be an anticipating reference for Claims 42, 52-53, 59 and 69-70. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these Claims.

III. Rejection of Claims 41-42, 47-49, 58-59 and 64-66 under 35 U.S.C. §102

The Examiner has rejected Claims 41-42, 47-49, 58-59 and 64-66 under 35 U.S.C. §102(b) as being anticipated by Ikegami. Independent Claims 41 and 58 currently include the element of at least one lens array placed within a drift space, the lens array splitting an electron beam into a plurality of beams. The present invention, as detailed on page 4, lines 15-30, of the application as filed, defines drift space to be a region where no or substantially no electric field is present. The present invention goes on to say that the absence of the electric field provides for no acceleration or deceleration of the electrons.

Ikegami is directed to an in-line type electron gun. (Title) Ikegami teaches, with respect to Fig. 2a, that grids 2, 3, 4, and 5 may be placed in the path of a cathode 1. In contrast to the present invention, however, Ikegami teaches that its grids 2 and 3 are placed outside of the drift space, as defined by the present invention, and further that grids 4 and 5 do not split the electron beam into a plurality of beams. Accordingly, whether referring to grid 2, 3, 4, or 5 of Ikegami, the grid fails

to both be placed in the drift space and be configured to split an electron beam into a plurality of beams. Accordingly, Ikegami fails to disclose the aforementioned claimed element.

Therefore, Ikegami does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 42, 47-49, 59 and 64-66 are dependent upon Claims 41 and 58, Ikegami also cannot be an anticipating reference for Claims 42, 47-49, 59 and 64-66. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these Claims.

IV. Rejection of Claims 43-46, 54 and 60-63 under 35 U.S.C. §103

The Examiner has rejected Claims 43-46, 54 and 60-63 under 35 U.S.C. §103(a) as being unpatentable over Bono as applied to claims 41 and 58 above, and further in view of Schamber. The Applicants established above that Bono fails to disclose the element that at least one lens array splits the electron beam into a plurality of sub beams. Given the detailed teaching of Bono that only one of the micro lenslets may be accessed by the coarse deflection of the electron beam at any one time, Bono also fails to suggest this element.

The Examiner is offering Schamber for the sole proposition that a liner may be used in a replaceable electron gun. Notwithstanding whether Schamber actually teaches or suggests that a liner may be used in a replaceable electron gun, Schamber fails to correct the deficiencies of Bono in that it also fails to teach or suggest the element that at least one lens array splits the electron beam into a plurality of sub beams. As the Examiner is well aware, a teaching or suggestion of a liner used in a replaceable electron gun is quite different from a teaching or suggestion that at least one lens

array splits the electron beam into a plurality of sub beams. Accordingly, Schamber also fails to teach or suggest this claimed element.

Thus, Bono, individually or in combination with Schamber, fails to teach or suggest the invention recited in independent Claims 41 and 58 and their dependent claims, when considered as a whole. Accordingly, the references alone or in combination fail to establish a prima facie case of obviousness with respect to those claims. Claims 43-46, 54 and 60-63 are therefore not obvious in view of Bono and Schamber.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 43-46, 54 and 60-63 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

V. Rejection of Claims 50-51, 56 and 67-68 under 35 U.S.C. §103

The Examiner has rejected Claims 50-51, 56 and 67-68 under 35 U.S.C. §103(a) as being unpatentable over Bono as applied to claims 41 and 58 above, and further in view of Fink. The Applicants established above that Bono fails to disclose the element that at least one lens array splits the electron beam into a plurality of sub beams. Given the detailed teaching of Bono that only one of the micro lenslets may be accessed by the coarse deflection of the electron beam at any one time, Bono also fails to suggest this element.

The Examiner is offering Fink for the sole proposition that the micro lens may be made of continuous foil. Notwithstanding whether Fink actually teaches or suggests that the micro lens may be made of continuous foil, Fink fails to correct the deficiencies of Bono in that it also fails to teach or suggest the element that at least one lens array splits the electron beam into a plurality of sub

beams. As the Examiner is well aware, a teaching or suggestion of micro lens made of continuous foil is quite different from a teaching that at least one lens array splits the electron beam into a plurality of sub beams. Accordingly, Fink also fails to teach or suggest this claimed element.

Thus, Bono, individually or in combination with Fink, fails to teach or suggest the invention recited in independent Claims 41 and 58 and their dependent claims, when considered as a whole. Accordingly, the references alone or in combination fail to establish a prima facie case of obviousness with respect to those claims. Claims 50-51, 56 and 67-68 are therefore not obvious in view of Bono and Fink.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 50-51, 56 and 67-68 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

VI. Conclusion

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 41-50, 52-53, 55-67, 69 and 70.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

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